SHIPMAIN Overview

Updated 01 February 2006

What Is SHIPMAIN?

- Started Nov 2002 by Surface Ship Leadership
- Transform Maintenance & Modernization planning processes
- From “Effective but not Efficient”, to “Both”
- Accomplish right work, right time, right cost
- Collaborate across Enterprise stakeholders
  - Commands, customers/suppliers, internal/external
- Link closely with Regional Maintenance Integration
- Use proven commercial process improvement methods
- Deliver FRP-ready Fleet at a lower cost

Fleet Response	*Cost-Wise Readiness*	*Recapitalization*

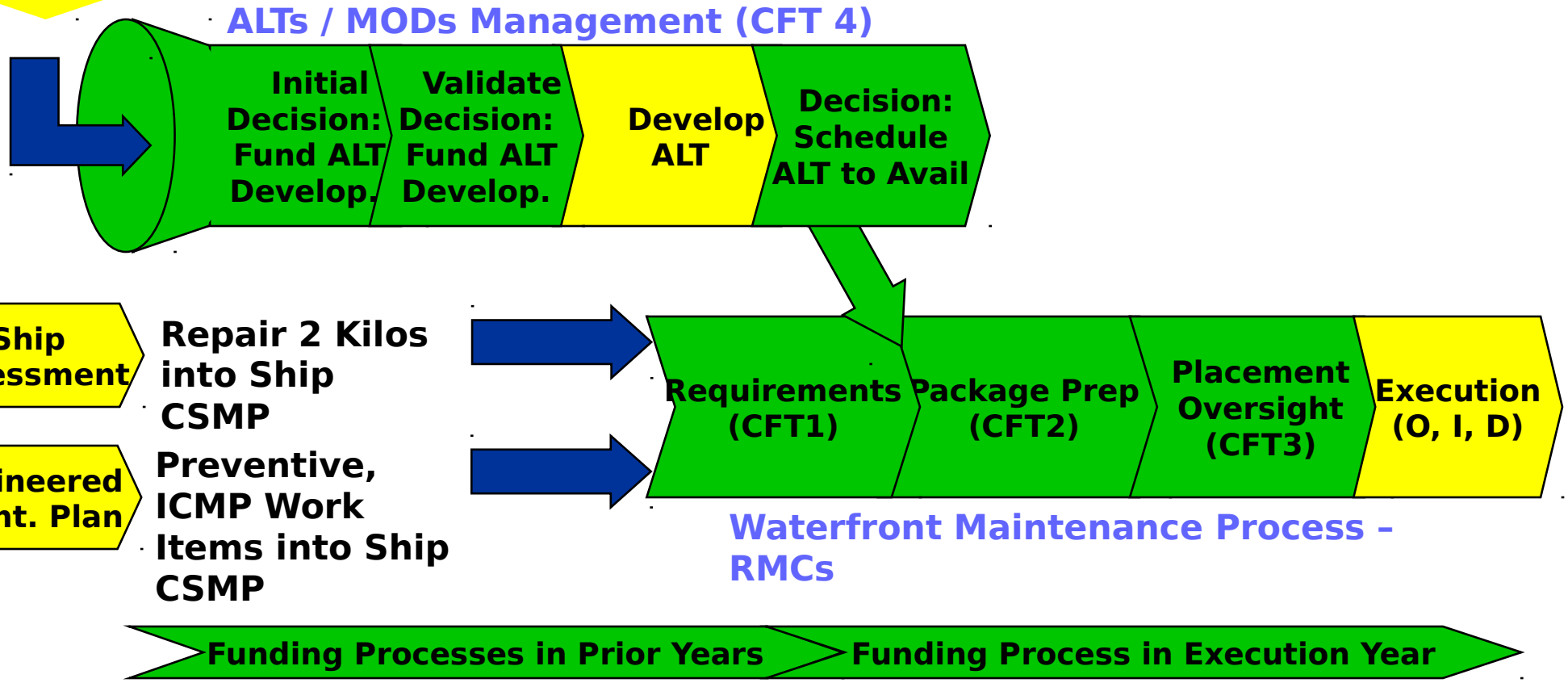
SHIPMAIN Objectives

- **Install a common planning process for**
  - **Surface Ship maintenance**
  - **Surface Ship, Carrier Modernization (Enabling Submarine integration in FY06)**
- **Increase the efficiency of the process and deliver quantifiable savings without compromising its effectiveness**
- **Install a disciplined management process with objective measurements**
- **Institutionalize the process and a continuous improvement method**

Scope & Methodology

Generators:
- Mission
- Reliability
- Maintainability
- Availability

Included-Active
Excluded


ALTs / MODs Management (CFT 4)
Initial Decision: Fund ALT Develop.
Validate Decision: Fund ALT Develop.
Develop ALT
Decision: Schedule ALT to Avail
Ship Assessment
Repair 2 Kilos into Ship CSMP
Engineered Maint. Plan
Preventive, ICMP Work Items into Ship CSMP
Requirements (CFT1)
Package Prep (CFT2)
Placement Oversight (CFT3)
Execution (O, I, D)
Waterfront Maintenance Process – RMCs
Funding Processes in Prior Years
Funding Process in Execution Year

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Senior Leadership – Enterprise Collaboration

SHIPMAIN PIT

VADM Etnyre – CEO

VADM Sullivan (NAVSEA)	VADM Zortman (CNAF)
VADM McArthur (NNWC)	RADM Hamilton (PEO Ships)
RADM McCullough (N76)	RDML McCoy (SEA 05)
RDML Frick (PEO IWS)	RADM Nowakowski (CNSL)
RDML Roesner (NAVICP)	RADM Hugel (SEA 04)
RDML Flynn (SPAWAR)	RDML Timme (SEA 07)
RDML Orzalli (OPNAV N43)	Mr. Cox (PEO C4I)
Mr. Klein (SPAWAR)	

01Feb 2006

COO – RADM Brooks (FFC N43)

TG: Mr. Zych

Process Team

Leader: RADM Brooks
AO: Dale Hirschman
TG: John Wagner

Communications Team

Leader: CDR Navratil
TG: Karen Tarrillion

Metrics Team

Leader: Ed Moe
TG: Tom Belter

CFT1
'Requirements'

Leader: RADM Nowakowski / RDML Orzalli
AO: CAPT Nimitz
Metrics: LCDR Mason, Mr. Fenner
TG: John Wagner

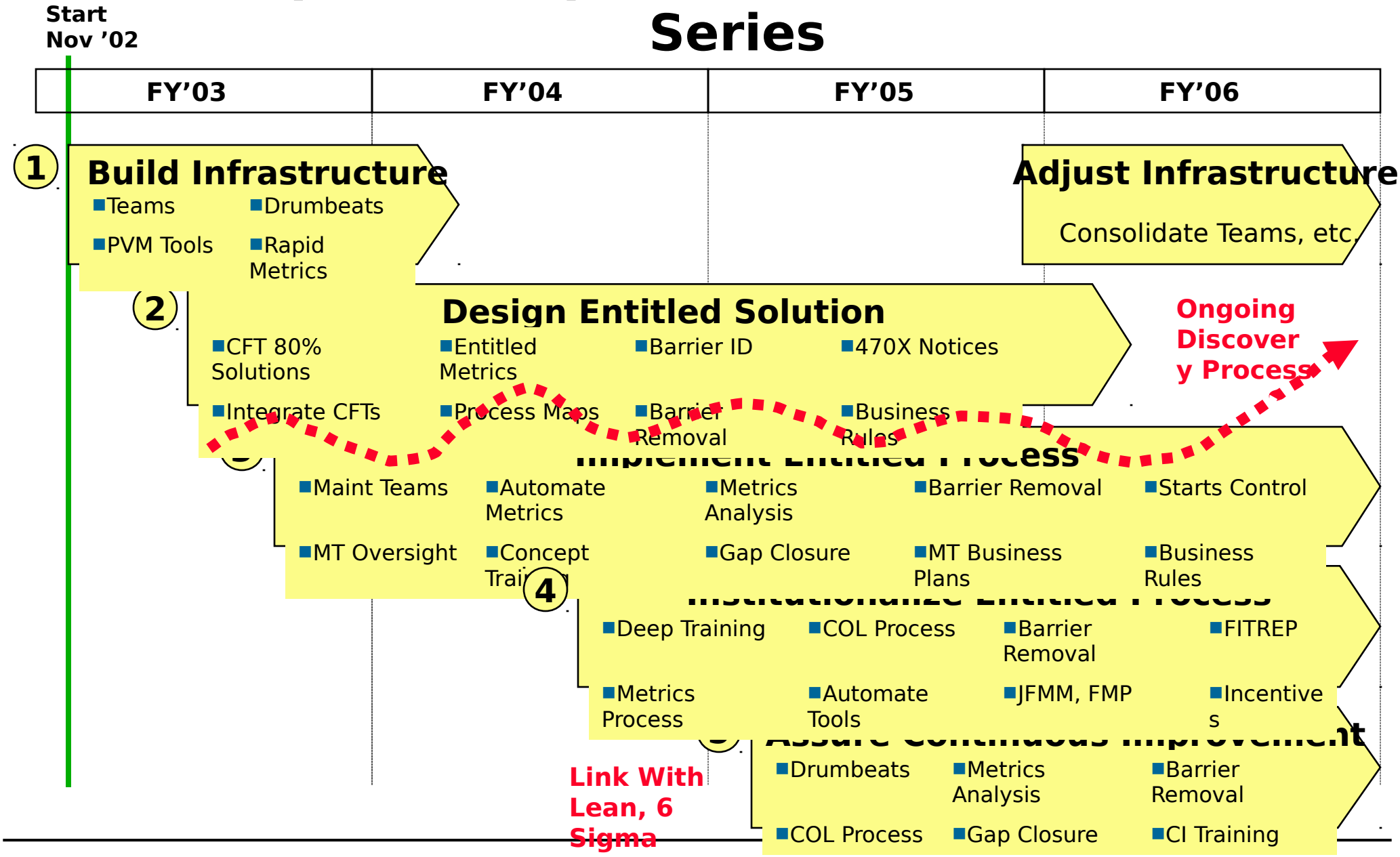
CFT23
'Package Preparation'
'Placement & Oversight'

Leader: RADM Hugel / RDML Flynn
AO: Tom Coumes
Metrics: LCDR Mason, Mr. Fenner
TG: Tom Meyer

CFT4
'Alts / Mods Mgmt'

Leader: RDMLs McCoy, Buzby Andrew Cox
AO: CAPT Pedersen
Metrics: CDR Tate
TG: Dean Rock

Speed – Implement in Parallel, Not Series



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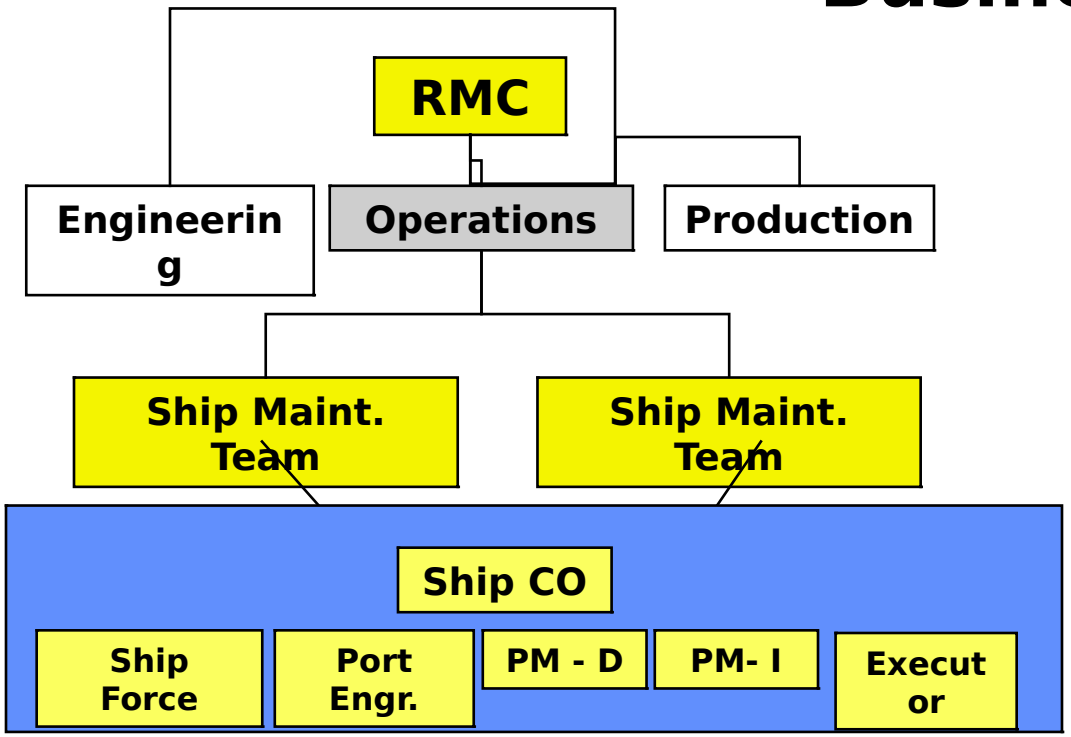
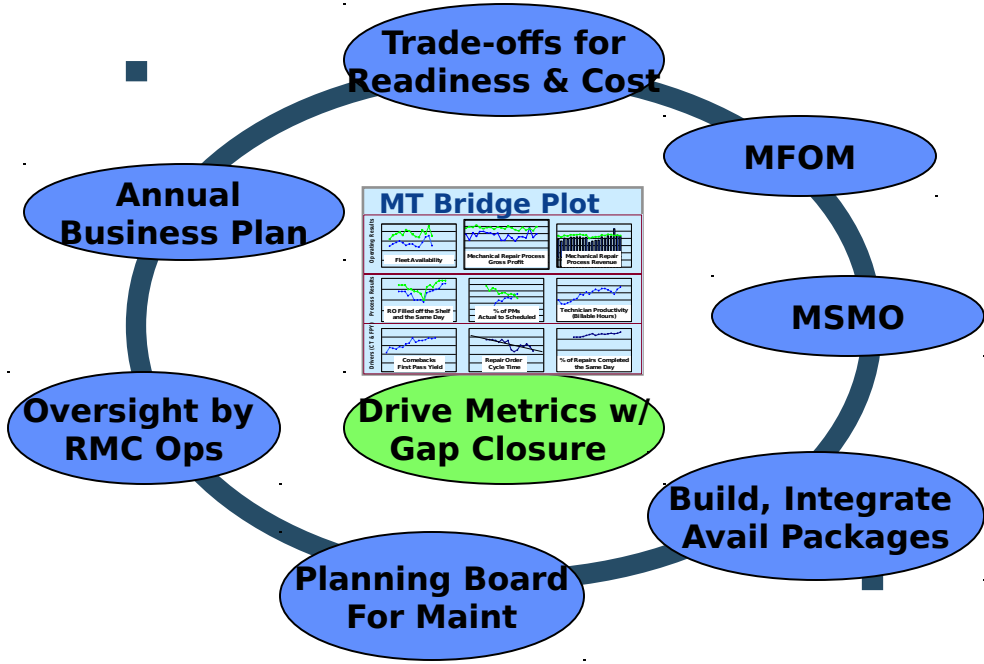
Maintenance - Major Enhancements

- **Single universal streamlined process**
- **Hull Maintenance Teams continuously focus on maintenance**
- **MFOM (Maintenance Figure of Merit) helps work prioritization and funding allocations to ships within Class**
- **Integrated Class Maintenance Program is re-validated**
- **Hull business plans and more stable funding reduce the churn**
- **MSMO contracts allow longer term, win-win relationship with Executor**
- **Executing activity does the planning, gets involved early**
- **Metrics**
  - **Show barriers to process goals**
  - **Improve as barriers are removed, and cycles of learning are applied**

Hull Maintenance Team "Runs Its Business"





- Integrates ship, shore, and execution activities into one team
- Manage ship funds for material condition and efficiency
- Plan more work in scheduled CM and CNO avails
- **So What?** More output for each dollar spent (work, material condition)

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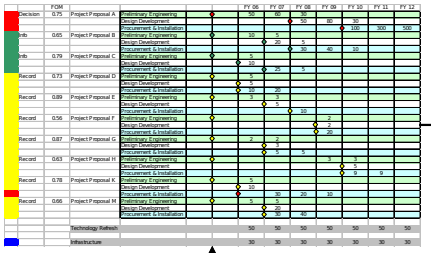
Modernization – Major Enhancements

- **A single, disciplined, decision process involving the customer**
  - **Just 2 types of ship changes: Program or Fleet Alts (vs. 40+ types)**
  - **A single, authoritative database for ship changes (NDE)**
  - **Alts list is ranked / prioritized**
  - **Gate approvals by hierarchy of O-6, 1&2 Star, 3 Star Boards**
  - **A common set of milestones for all modernization sponsors to follow**
- **Approved Alts are procured and installed within 3 years**
- **A balanced Modernization Plan (MP) for Carriers and Surface Ships**
- **Zero the churn**
- **Metrics**
  - **Show barriers to process goals**
  - **Improve as barriers are removed, cycles of learning are applied**

Modernization Plan



CNO Sponsors Program Proposal (SPP)

Hull MMBP (Maint and Mod Business Plan)

Procure & Install

Flag O-6 Board

Decision Point 1

Flag O-6 Board

Decision Point 2

Flag O-6 Board

Decision Point 3

END

Fund Prelim. Engineering

Recommended Change Package (RCP)

Cost Benefit Analysis

Assign AFOM

Technical Assessment

Review Cycle

Ship Change Document

START

Program Alt

Fleet Alt

Fund Design & Development

Recommended Change Package (RCP)

CBA

Update AFOM

TA

Review Cycle

Modification System Performance Specification

System Design Effort

Fund Procure and Install

Recommended Change Package (RCP)

CBA

Update AFOM

TA

Review Cycle

Modification System Detail Specification

System Design Effort

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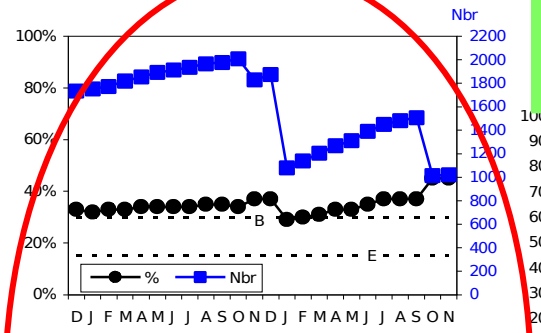
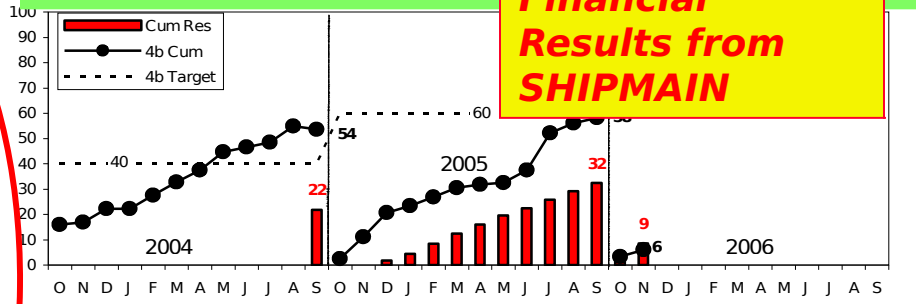
A Metrics Driven Process

Key Premiums Driver

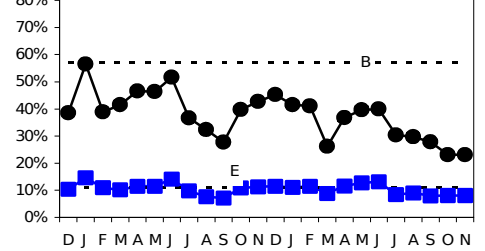
Financial Results from SHIPMAIN



1. ALTs Not Install. within 3 yrs

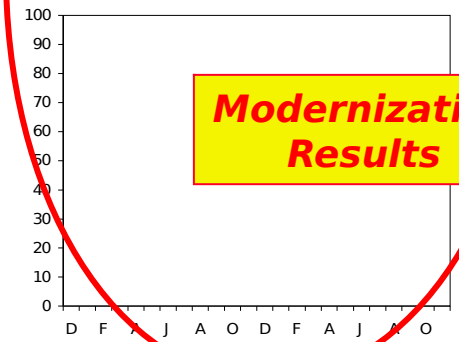


10. Roll-up Financial Value

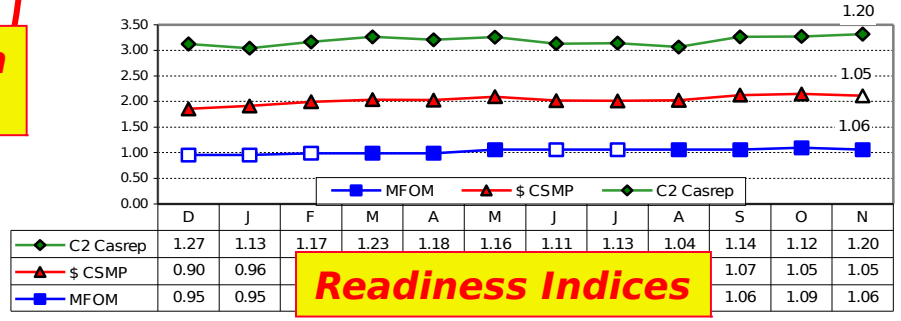


8. End Avail Churn

Modernization Results



2. Future Modernization Metric



	D	J	F	M	A	M	J	J	A	S	O	N
C2 Casrep	1.27	1.13	1.17	1.23	1.18	1.16	1.11	1.13	1.04	1.14	1.12	1.20
$ CSMP	0.90	0.96								1.07	1.05	1.05
MFOM	0.95	0.95								1.06	1.09	1.06

Readiness Indices

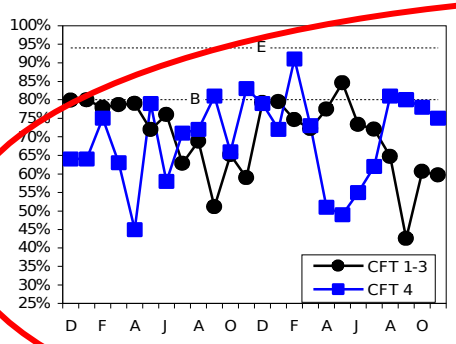
9. Readiness Indices

Savings over FYDP

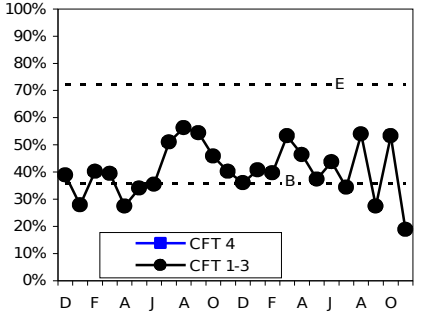
	FY06	FY07	FY08	FY09	FY10	FY11	FDYP
Mod	93.5	24.5	24.5	18.7	18.8	20.4	200.4
Maint	72.3	82.3	71.4	84.3	82.5	97.2	490.0
Total	165.8	106.8	95.9	103.0	101.3	117.6	690.4

All figures in $ Million

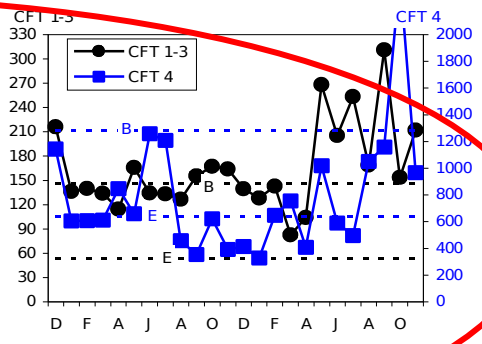
7. POM 06 Mitigations for Modernization & Maintenance



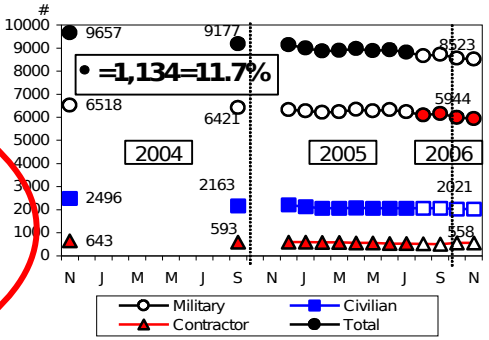
3. OTD Roll Up



4. FPY Roll Up



5. CT Roll Up (Days)



6. Resources - RMCs

Process Drivers - Agility

Process Cost

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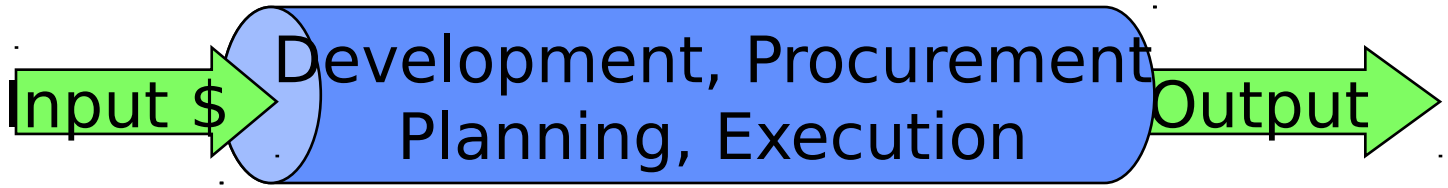
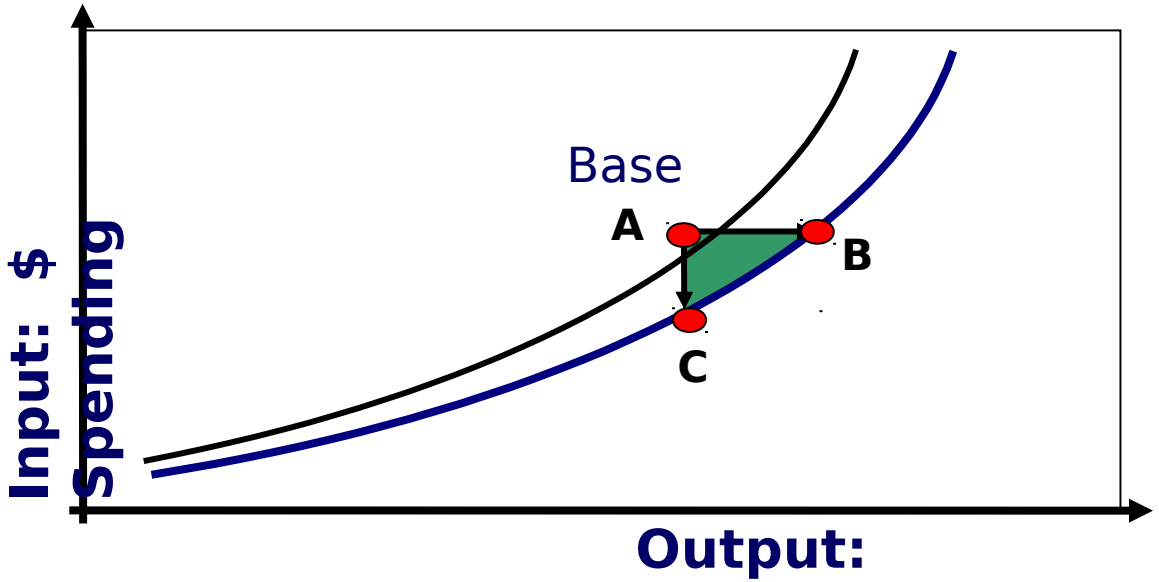
SHIPMAIN - More Output Per Dollar Spent





Management Options

- A to B = More output, same $
- A to C = Same output, less $

- **Work, Material Readiness**
- **Authorized Alts, Added Capability**

How To Increase Output Per Dollar Spent?
Modernization

- **Apply our constrained $ to highest priority Alts**
- **Reduce avoidable “sunk costs” that add no value**
  - **Alts Developed, but not installed**
  - **Alts Procured, but not installed**
- **Reduce avoidable installation “premium costs”**
  - **Alts added to package late – late work premiums**
  - **Late ILS and SIDS – rework**
  - **Unforeseen conjunctive Alts & support services – extra costs**
- **Comply with planning and funding milestones**
- **Results to date – Level of Effort is down**
  - **Reduced active Alts from 25,000 to <5,000 high priority Alts**
  - **Early decision to stop work on $215M in FY06 Alts**

SHIPMAIN Helps USN Re-Capitalize

- **Alts prioritization by TYCOM and Sponsor ena**
  - **Informed decisions on funding increases/decreases**
  - **Assurance that we fund the highest priorities**
  - **Two funding reduction decisions for POM06**

Funding $M	FY06	FY07	FY08	FY09	FY10	FY11	FYDP
Decision Jul 2004	67						**67**
Decision Jan 2005	26.5	24.5	24.5	18.7	18.8	20.4	**133.4**
Total $M	**93.5**	**24.5**	**24.5**	**18.7**	**18.8**	**20.4**	**200.4 M**

Rank	Alt #
1	**276**
2	**129**
3	**667**
4	**556**
5	**342**
299	
300	**754**
301	**233**
302	**598**
303	**557**
304	**496**
305	**857**
306	**101**
307	**286**

Funded

Un-Funded

- **Alts are ranked in priority in the POM06 Modernization Plan**
- **$200M returned to Big Navy over the FYDP**

How To Increase Output Per Dollar Spent?
Waterfront Maintenance

- **Metrics show avoidable, excess costs that add no value**
- **Reduce premium costs in targeted categories**

Category of Premiums	FY04 Reduction	FY05 Reduction
Late Work - CNO	**$41 M**	**$44 M**
Late Work - CM	TBD	TBD
Late Work - Emergent	**$13 M**	**$ 14 M**
Port Loading	TBD	TBD
Total	**$54 M**	**$58M**

- **Results to date: $54M in FY04, $58M in FY05 premium costs avoided vs. FY03, invested in more work (repair, MACHALTS, etc.) on surface ships**

SHIPMAIN Efficiency Helps USN Re-Capitalize

- **Output efficiency has increased our buying power for maintenance work**
- **In FY06, CNSF reduced the needed maintenance requirements**

		FY06	FY07	FY08	FY09	FY10	FY11	FYDP
SHIPMAIN	**$M**	**72.3**	**82.3**	**71.4**	**84.3**	**82.5**	**97.2**	**490M**

POM 06 Mitigations due to reduced premium cost

So What?

- **Provides Big Navy with $490M savings over the FYDP**
- **Enough to buy 2 - LCS Ships**

Present Status of SHIPMAIN

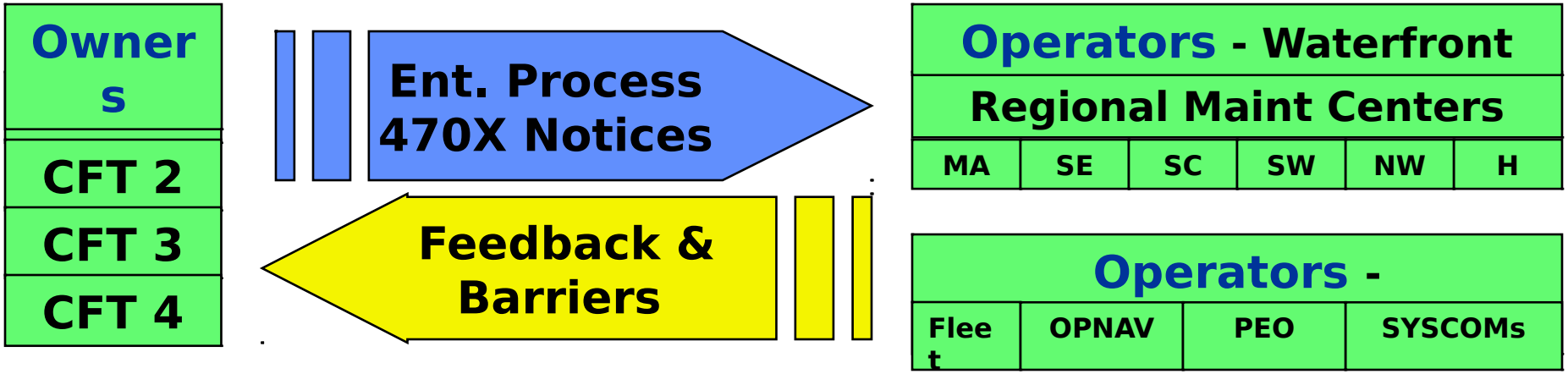
- **Internalization assessment**
  - Assessments in progress for Maintenance, Modernization Entitled Process
  - Preliminary findings:
    - Maintenance Entitled Processes not fully internalized
    - Some sub-processes and tools not fully available, understood, and consistently applied
    - Progressively deeper training underway at deckplates, stakeholders, and in schoolhouses
    - Modernization: TBD
- **Processes and tools**
  - Planning Milestones published & distributed. Results are improving
  - Metrics are driving improvement and illuminating barriers
  - Support tools and databases under revisions and upgrades based on lessons learned
  - Modernization Software (NDE) development on schedule (to be released 1 May, 2006)
- **Premiums reductions –** on track with IRCA targets. Need to assure sustainability.
- **Ship Change modernization**
  - Approximately 3500 active ship changes, down from 48,000
  - Entitled Modernization Process defined by major stakeholders, implementation underway
  - Process being revised to ensure flexibility (e.g., emergent, expedite and non-permanent installs)

What to Expect in FY06 ?

- Pursue internalization / implementation the entitled processes throughout the organization
- Putting enablers in place to make the Maint Teams and modernization stakeholders successful
- Establish Process and component ownership in the permanent organization
- Increasing focus on planning milestone adherence
- Methodically removing barriers
- Emphasis on managing process results through metrics
- Training on a more frequent and deeper basis

Extras

Implement: Process Owners & Operators Collaborate



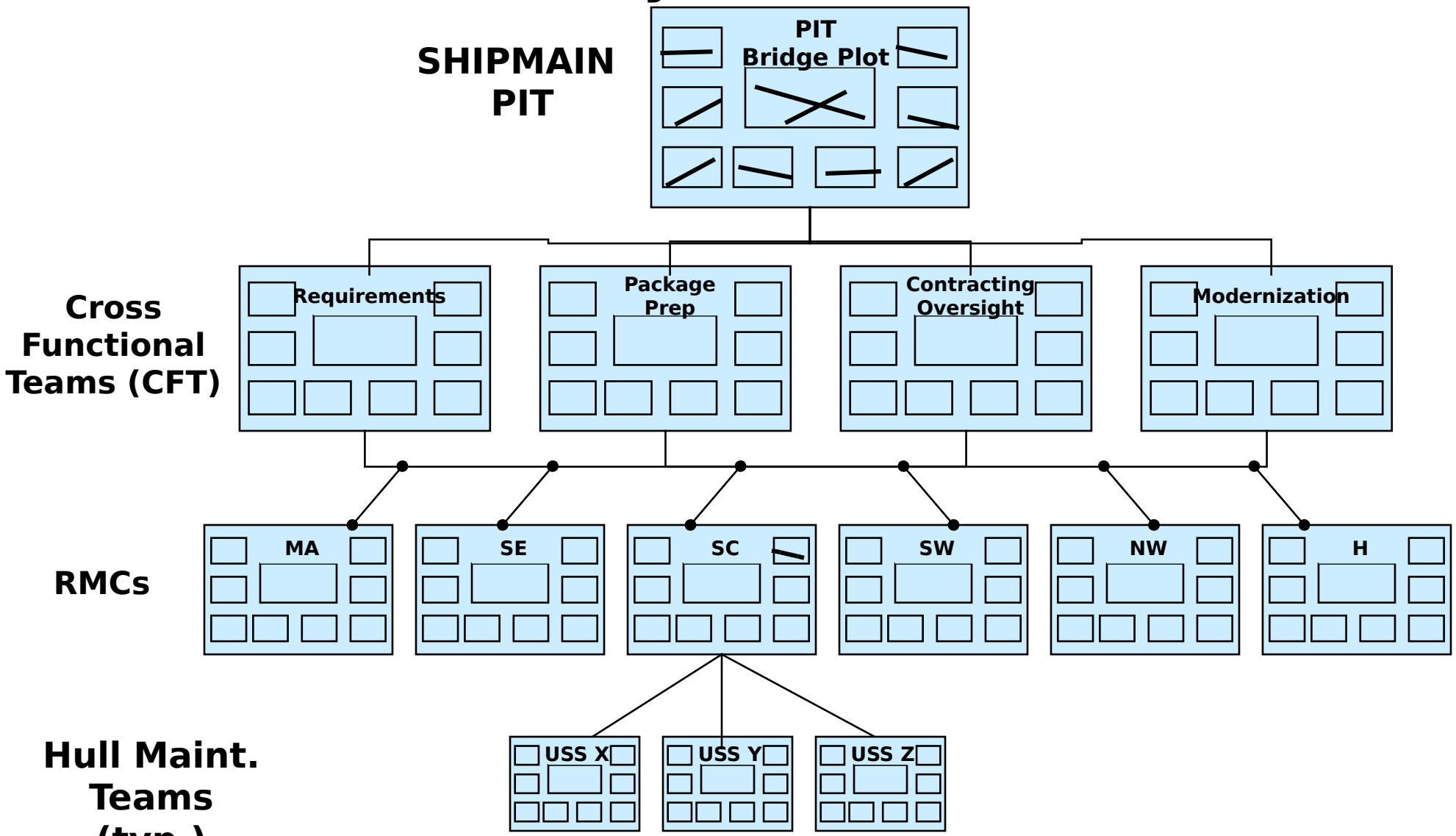
Owners.....

- **Design** the process
  - 470X Notices
  - Business Rules
  - Metrics
  - Tools
- Drive Metrics gap closure
- Remove **systemic** barriers

Operators.....

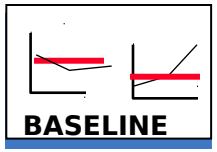
- **Operate** the processes
- Drive Metrics gap closure
- Remove **local** barriers
- Feedback to Owners
- Escalate **systemic** barriers to CR

Hierarchical Metrics – Drive Gap Closure at Every Level



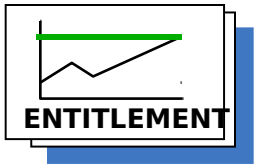
Tools for Continuous Process Improvement

Establish Operational Baselines

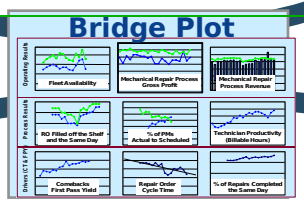


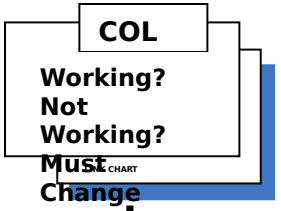
Vision

Drive With Metrics



Set Financial Objectives

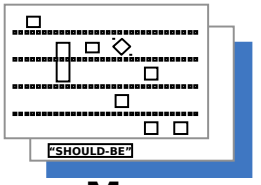




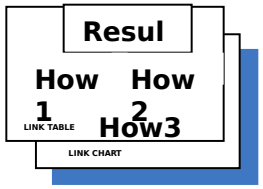
Lessons Learned #7

Process Value Management ®

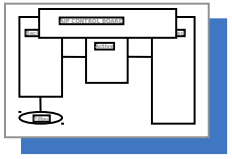
Total Cycle Time
Lean, Six Sigma,
Theory of Constraints



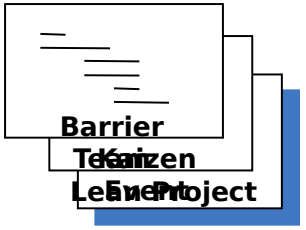
Map Processes #1



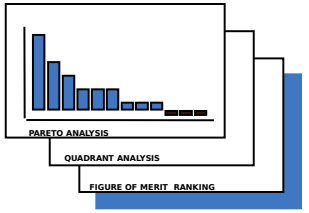
Link Actions to Results #6



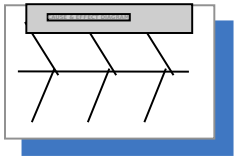
Manage Tasks & Priorities #5



Remove Barriers, Waste #4

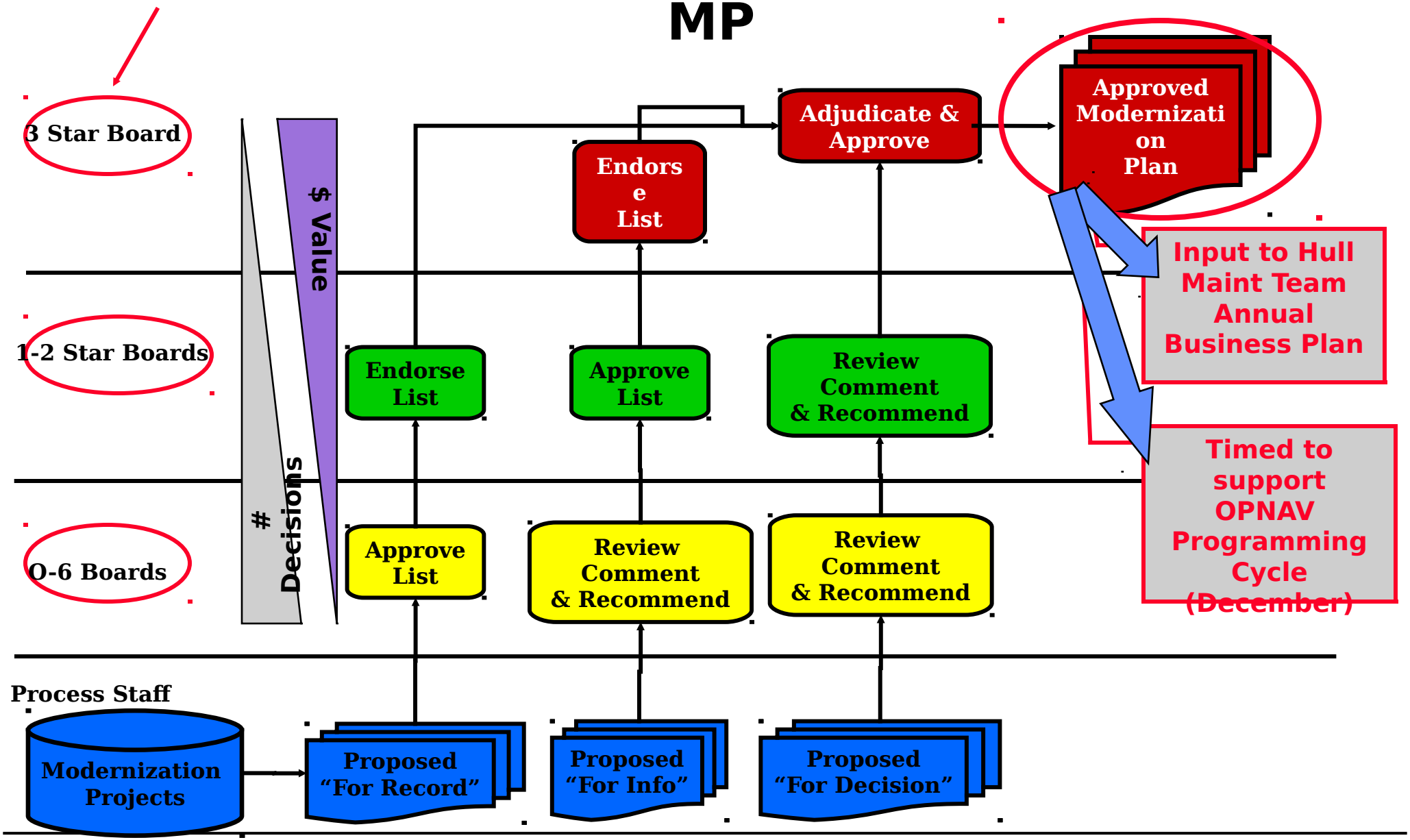


Rank Barriers #3



Identify Barriers, Waste #2

Boards Run the Process to Create a Balanced MP



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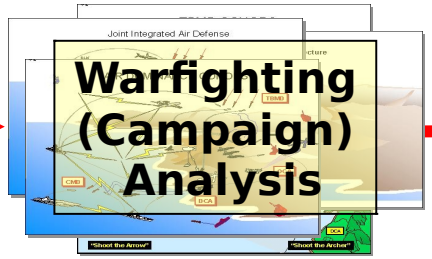
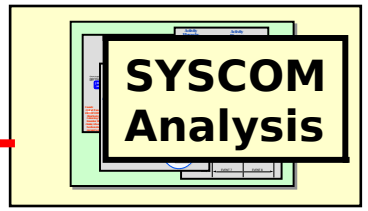
Modernization Plan is Integrated with POM Process

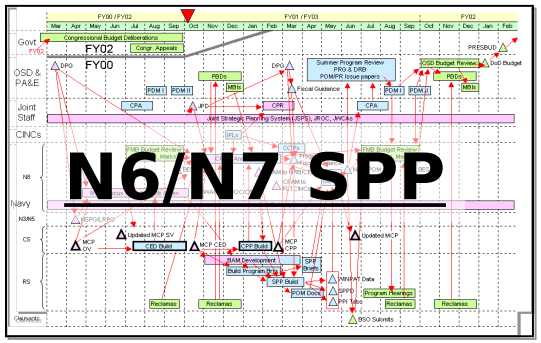


Force Capability Metrics

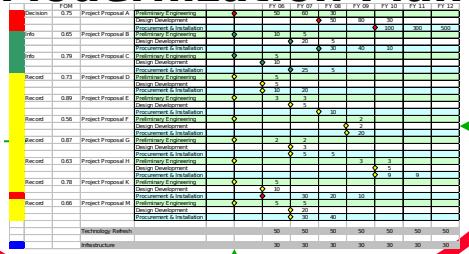


MCP MCP

Mission Area Analysis



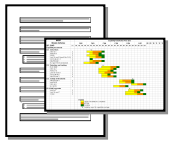
Modernization Plan



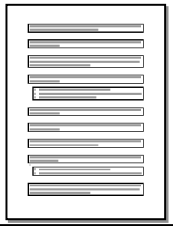
4 NCP

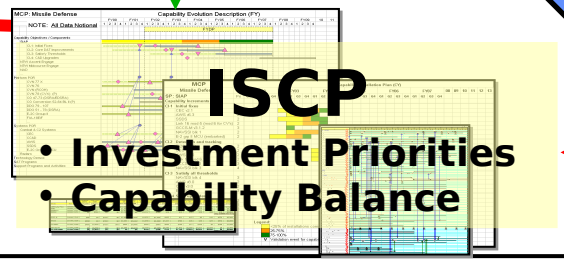
S & T Assessment

Transformation Roadmap



Program Guidance





Investment Strategy

Force Structure & Munitions (NNOR) Analyses

SHIPMAIN